The island escape

Jesse has escaped prison. Walter has given him a way, which if followed would lead to Jesse's successful escape.

He must pass a grid**(M * M)** of islands. He can start from any island in the first row. When he reaches any island of the last row, he is said to have escaped. Each of the island has a cost to be at.

If Jesse is on an island j in Row i, then he can go only to 3 islands in the next move. All these three islands would be in Row i+1, namely the jth, j-1th and j+1th islands.

You have to give the minimum cost, it would take Jesse to successfully escape as instructed by Walter.

Input:
The first line of Input contains T, the number of test cases. First line of each test case is M, denoting the dimension of the grid of islands (the grid is M*M) Each of the next M lines have M spaced integers representing the costs to be at the islands.(the ith line represents the costs to be at islands in the ith row.

Output:
For each test case output a single integer denoting the minimum cost it would take Jesse to cross the islands.

Constraints
1<=T<=100
1<=M<=1000
0<=each cost value to be at island<=100000

Sample Input
2
2
1 2
5 1
3
10 11 1
10 1 10
10 10 1

Sample Output
2
3

Explanation
Output 1: Least path would be 1 + 1= 2
Output 2: Least path would be 1 + 1 + 1= 3

Time Limit5 sec(s) (Time limit is for each input file.)